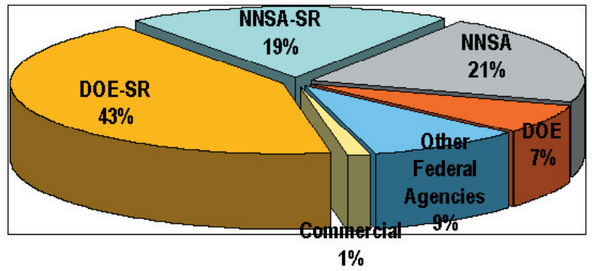
Customers

SRNL has a broad customer base, including:

- U.S. Department of Energy
- National Nuclear Security Administration
- U.S. Department of Defense
- U.S. Department of Homeland Security
- U.S. Department of Justice
- NASA
- International Atomic Energy Agency
- Other National Laboratories
- Commercial companies
- Academia

FY06 funding for SRNL is approximately $126.5M, from the following customers:



Location

SRNL is located at the Savannah River Site, a 310-square mile DOE facility in South Carolina, near Aiken, S.C. and Augusta, Ga.

Background

SRNL is the nation's newest national laboratory, but its tradition of putting science to work in service to the nation goes back over 50 years.

The laboratory was established in 1951 to provide technology research and development support for the Atomic Energy Commission's new Savannah River Plant. Its researchers developed technological solutions for the many challenges of building and bringing into operation five nuclear production reactors and related facilities. Over the decades, the Savannah River Plant became DOE's Savannah River Site, and the Savannah River Laboratory (or the Savannah River Technology Center, as it was later called) developed into an internationally-recognized laboratory with outstanding expertise in hydrogen technology, materials science, environmental research, robotics engineering, analytical chemistry, hazardous material stabilization, and technologies for non-proliferation and national security.

On May 7, 2004, Secretary of Energy Spencer Abraham designated the laboratory the Savannah River National Laboratory, one of only 12 laboratories nationwide to carry the "national laboratory" designation.

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We Put Science To Work™

SRNL is operated by Washington Savannah River Company for the U.S. Department of Energy

SRNL™ Savannah River National Laboratory **factsheets**

Savannah River National Laboratory Overview

Savannah River National Laboratory (SRNL) puts science to work to create and deploy practical, high-value, cost-effective technology solutions. As the applied research and development laboratory at the U.S. Department of Energy's (DOE) Savannah River Site (SRS), SRNL serves the DOE and the nation, supporting customers at SRS, throughout DOE, in other federal agencies, and across the country.

SRNL enables its customers to achieve success through an unwavering commitment to

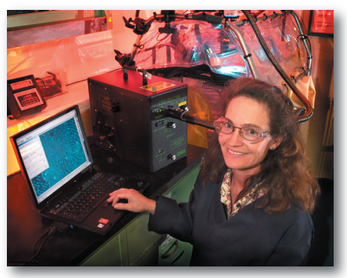
Safety – the best safety record of any DOE laboratory

Security – stellar record of protecting the nation's interest

Quality – technology solutions that work

The laboratory serves the nation in three major program areas:

Metal hydride materials developed for hydrogen storage



Nuclear forensics support

Energy Security

- Hydrogen technology – Technologies needed to make the wide-spread use of hydrogen practical for powering our automobiles, homes and industry, including:
  - Advanced hydrogen storage technologies that are safe, lightweight and cost-effective
  - Clean methods for producing hydrogen, including production in a nuclear reactor

National and Homeland Security

- Tritium technology – Research and development for continuous improvement of the processes that maintain the nation's supply of tritium (the radioactive form of hydrogen used in national defense)
- Nuclear materials technology – Research and development into the safe handling and disposition of plutonium and spent nuclear fuel to advance the nation's nuclear nonproliferation goals
- Homeland security – Technologies, training and consultation for a variety of national, regional and local homeland security and law enforcement needs
- Nuclear forensics
- Monitoring and detection capabilities for nuclear nonproliferation

Environmental and Process Technology

- Cleanup technology – Technologies for cleaning chemical and radiological contaminants from the soil and water, including:
  - A wide range of tools that match the aggressiveness of the cleanup technology to the level of contamination
  - Use of naturally occurring microorganisms to break down or isolate contaminants

continued on next page

SRNL

Stabilization of nuclear weapons byproducts in glass

Development of optical methods and sensors

Collaborative research agreement signing between Dr. Matthew J. Kluger (left), Medical College of Georgia Vice President for Research, and Dr. Todd Wright, SRNL Director.

Environmental and Process Technology (cont'd)

- Techniques that harness and measure nature's own decontamination abilities

- Hazardous materials disposition – Technologies to safely store, stabilize, treat and permanently dispose of all types of waste, including low- and high-level radioactive waste, including:
  - Technologies to immobilize high-level radioactive waste in a safe, stable glass form, suitable for long-term disposition
  - Technologies for immobilizing nuclear materials in cement, safely isolating them from the environment
  - Technologies for separating complicated materials into their constituent ingredients, so that each can be treated in the most efficient method

Expert Staff

SRNL has a total employment of approximately 870

- Research staff of approximately 670, approximately 25% of whom hold PhDs
- Includes chemists, physicists, biologists, microbiologists, mechanical engineers, chemical engineers, nuclear engineers and a variety of other scientists, engineers and technicians

SRNL's highly skilled scientists, engineers and technicians provide timely and creative solutions to a myriad of challenges under conditions that require utmost attention to safety and security. We put science to work by integrating their knowledge and skills in the following core competencies:

- Hydrogen and Tritium Science and Technology
- Chemical and Radiochemical Processing
- Environmental Science and Biotechnology
- Engineered Specialty Systems
- Materials Science
- Analytical Chemistry
- Computational Science and Modeling
- Sensor Development

Partnerships

SRNL has established strong working relationships with research universities in the region, to advance a technology-based economy driven by technological innovation.

In addition, SRNL forms partnerships with other national laboratories, universities and private industry … whatever combination of expertise will result in the best, most cost-effective solutions for the laboratory's customers.

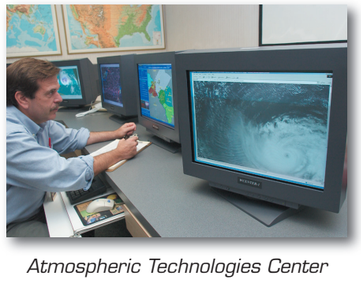
Facilities

SRNL has a variety of unique and traditional laboratory spaces for numerous types of research and prototype development, including:

At the Savannah River Site:

- Shielded cells - special containment facilities which provide the shielding and confinement necessary for examination, analysis, and testing of highly radioactive materials
- Glovebox facilities - sealed, protectively-lined compartments with attached gloves which allow workers to handle materials safely
- Radiochemistry and analytical laboratories with contained instruments
- Remote systems laboratory - laboratory for the design, development, fabrication, and testing of unique equipment systems for use in radioactive, hazardous, or inaccessible environments
- Engineering development laboratory - laboratory for performing innovative tests and demonstrations of equipment and existing/proposed designs
- Metal hydride laboratories - laboratories for research and development on metal hydride absorption and desorption performance
- High-pressure test facility - facility with three unique steel-walled cells for high-pressure hydrogen exposure and testing, fatigue testing, and fracture toughness testing of metal specimens
- Atmospheric Technologies Center with extensive capabilities for world-wide meteorological forecasts and real-time atmospheric transport modeling and assessment
- Ultra low-level underground counting facility - one-of-a-kind facility located 50 feet below ground level with four-inch thick walls of pre-nuclear weapons era steel which allows high-sensitivity measurements of ultra-low amounts of environmental radioactivity
- Primary standards laboratory - state-of-the-art facilities which provide calibration services compliant to the requirements of the American National Standard for calibration laboratories
- Rapid fabrication facility, which produces low-cost prototypes, parts, and complete working models
- Gamma irradiation facility for testing materials' ability to withstand radiation exposure

Shielded Cells



Atmospheric Technologies Center

At the Savannah River Research Campus:

The Savannah River Research Campus, owned by Aiken County, is a business and technology park adjacent to SRNL, which was established to facilitate collaboration with SRNL and enable technology transfer. The Aiken County Technology Laboratory at the Research Campus opened in December 2001. The approximately 21,000 sq. ft. laboratory houses SRNL's state-of-the-art:

- Waste treatment laboratories, using nonradioactive simulants
- Environmental biotechnology laboratories

The Center for Hydrogen Research is a new 60,000 sq. ft laboratory dedicated to hydrogen storage, separation, production, and materials development activities. SRNL's unclassified and energy-related hydrogen research and development will occupy half of this facility; the County will lease the other half to universities and industries involved in hydrogen R&D. SRNL moved into this facility in early 2006.

Aiken County Technology Laboratory

Visit SRNL on the web @ srnl.doe.gov